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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/588,293

05/16/2007

Ralf Dunkel

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7590

02/03/2009

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EXAMINER

RODRIGUEZ-GARCIA, VALERIE

ART UNIT

PAPER NUMBER

1626

MAIL DATE

DELIVERY MODE

02/03/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/588,293	<b>Applicant(s)</b> DUNKEL ET AL.	
	<b>Examiner</b> VALERIE RODRIGUEZ-GARCIA	<b>Art Unit</b> 1626	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 December 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 3 and 5-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-2 and 4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/04/2006</u> .  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

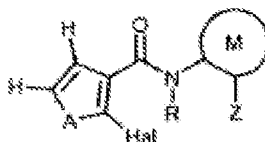
Claims 1-11 are currently pending in this application. Claims 1-2 and 4 (in part) and claims 3, 5-11 are withdrawn from further consideration by the Examiner pursuant to 37 CFR 1.142(b), as being drawn to a non-elected invention. The withdrawn subject matter is patentably distinct from the elected subject matter as it differs in structure and element and would require separate search considerations. In addition, a reference, which anticipates one group, would not render obvious the other.

### Priority

This application is a 371 of PCT/EP05/000629 filed on 01/22/2005, which claims priority benefit of foreign application Germany 10 2004 005 785.0 filed on 02/06/2004. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

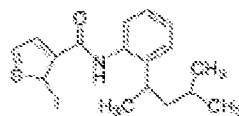
### Response to Restriction

Applicant's election with traverse of Group I, claims 1-2, 4 and 8-11, drawn to



products represented by formula (I)

and elected species of



Example 1 (page 73), Compound N-[2-(1,3-dimethylbutyl)phenyl]-2-iodothiophene-3-carboxamide, in the reply filed on 12/19/2008 is acknowledged. Applicant's arguments have been fully

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considered but they are not persuasive with respect to the restriction requirement.

Applicants argue that Groups I-III are related as products, processes for manufacturing the products, and use of the products. Applicants further argue the following:

such products, respectively. Section 1.475 (b)(3) of Title 37 of the Code of Federal Regulations states that a national stage application containing claims to a product, process of manufacture, and a process of use of said product will be considered to have unity of invention. Examining these three groups together would therefore not place an undue burden on the Examiner. Accordingly, Applicants respectfully request that the

The restriction requirement made under 35 U.S.C. 121 and 372 gives the Commissioner (Director) the authority to limit the examination of an application to only one invention where two or more independent and distinct inventions are claimed. It is pointed out that in accordance with 37 CFR 1.475 (a), a national stage application shall relate to one invention only or to a group of inventions so linked as to form a single general inventive concept. The Examiner has indicated that the inventions listed as Groups I-III do not relate to a single general inventive concept under 35 USC 121 or PCT Rule 13.1.

**PCT Rule 13.1** states that the international application shall relate to one invention only or to a group of inventions so linked as to form a single general inventive concept ("requirement of unity of invention").

**PCT Rule 13.2** states that the unity of invention referred to in Rule 13.1 shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features.

Annex B, **Part 1(a)**, indicates that the application should relate to only one invention, of if there is more than one invention, inclusion is permitted if they are so linked to form a single general inventive concept.

Annex B **Part 1(b)**, indicates that "special technical features" means those technical features that as a whole define a contribution over the prior art.

Annex B **Part 1(c)**, further defines independent and dependent claims. Unity of invention only is concerned in relation to independent claims. Dependent claims are

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defined as a claim that contains all the features of another claim and is in the same category as the other claim. The category of a claim refers to the classification of claims according to subject matter e.g. product, process, use, apparatus, means, etc.

Annex B **Part 1(e)**, indicates that the permissible combinations of different categories of claims. **Part 1(e)I**, states that inclusion of an independent claim for a given product, an independent claim for a process specially adapted for the manufacture of the said product, and an independent claim for a use of the said product is permissible.

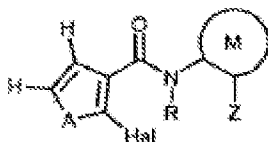
Annex B, **Part 1(f)**, indicates the “Markush practice” of alternatives in a single claim. **Part 1(f)I**, indicates the technical relationship and the same or corresponding special technical feature is considered to be met when (A) all alternatives have a common property or activity, and (B) a common structure is present or all alternatives belong to a recognized class of chemical compounds. Further defining (B), Annex B, **Part 1(f)(i-iii)**, the common structure must; a) occupy a large portion of their structure, or b) the common structure constitutes a structurally distinctive portion, or c) where the structures are equivalent and therefore a recognized class of chemical compounds, each member could be substituted for one another with the same intended result. That is, with a common or equivalent structure, there is an expectation relationship and the corresponding special technical feature results from a common (or equivalent) structure that is responsible for the common activity (or property). **Part 1(f) iv**, indicates that when all alternatives of a Markush grouping can be differently classified, it shall not, taken alone, be considered justification for finding a lack of unity. **Part 1(f)v**, indicates that “When dealing with alternatives, if it can be shown that at least *one* Markush alternative is not novel over the prior art, the question of unity of invention shall be reconsidered by the examiner”

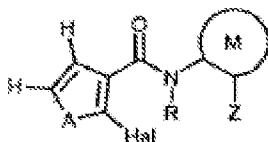
The Examiner has indicated that more than one independent and distinct invention is claimed in this application and has restricted (limited) the claimed subject matter accordingly. The restriction requirement is based on the premise that the instant inventions listed as Groups I-III do not relate to a single general inventive concept because the various compounds involved differ in structure and element so much that no common core can be construed, thus the lack of special technical feature. For example, there is no common core when A is sulfur, M is pyrazine and Z is phenyl and when A is oxygen, M is thiazole and Z is phenyl. Moreover, the number of variables, their huge possibilities, and the number of permutations and combinations thereof result

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in compounds so numerous and diverse so as to be a burden just to classify, search, and examine. Accordingly, the requirement to restrict is considered proper and is therefore made **final**. The search and examination of the application is directed to the generic embodiment identified for examination only.

**The scope of the invention of the elected subject matter is as follows:**



Compounds of formula (I), , depicted in claim 1, wherein: **A** represents **S (Sulfur) or O (oxygen)**; **M** represents **phenyl** and wherein **Z** is **Z1, Z2, Z3 or Z4** and **Z1, Z2, Z3 and Z4** are as defined. The scope of the invention is encompassed by claims 1-2 and 4.

As a result of the election and the corresponding scope of the invention identified supra, the remaining subject matter of claims 1-2 and 4 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to non-elected inventions. The withdrawn compounds contain varying functional groups such as thiophene, pyridine, pyridazine, etc. which are chemically recognized to differ in structure and function. This recognized chemical diversity of the functional groups can be seen by the various classifications of these functional groups in the U.S. classification system, i.e. class 549 subclass 29(+) (thiophene), class 546 subclass 1(+) (pyridine), 514 subclass 247(+) pyridazine, etc. Therefore, the subject matter which are withdrawn from consideration as being non-elected subject differ materially in structure and composition

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and have been restricted properly. A reference which anticipates the elected subject matter would not render obvious the withdrawn subject matter. In addition, the fields of search are not co-extensive.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Pursuant to Applicant's amendment claims 1-11 are pending, claims 3 and 5-11 are withdrawn and claims 1-2 and 4 (in part) are treated on the merits in this action. This is the First Action on the merits of the claims.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

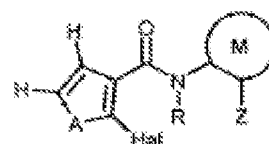
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

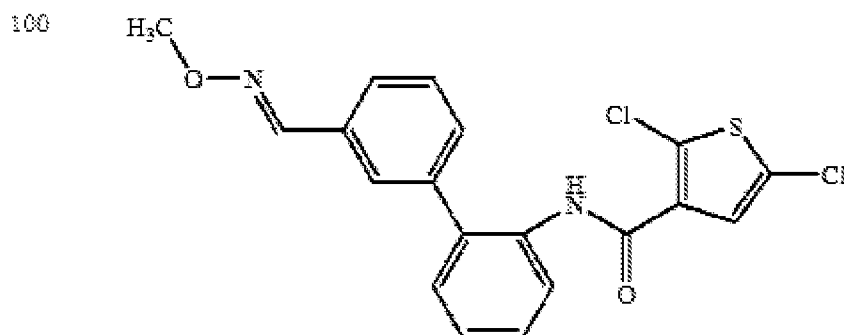
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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 1-2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 7,176,228 B2 (which is the equivalent for WO 02/08197).



The instant claims recite compounds of formula (I), depicted in claim 1, wherein: A represents S (Sulfur) or O (oxygen); M represents phenyl and wherein Z is Z1, Z2, Z3 or Z4, and Z1 represents optionally substituted phenyl. Claim 4 recites compositions comprising compounds of formula (I) in addition to extenders and/or surfactants.

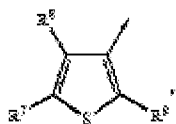
US 7,176,228 B2, in column 97, discloses the following compound:



In addition, column 11, lines 10-26 of the prior art describe preferred substituents in the thiophene ring.



A furthermore preferably represents a radical of the formula 10



15

in which

R<sup>7</sup> and R<sup>8</sup> independently of one another each represent 20  
hydrogen, fluorine, chlorine, bromine, methyl, ethyl or  
C<sub>1</sub>-C<sub>2</sub>-halogenoalkyl having 1 to 5 fluorine, chlorine  
and/or bromine atoms and

R<sup>5</sup> represents hydrogen, fluorine, chlorine, bromine, 25  
methyl or ethyl.

The prior art compounds have potent microbicidal activity (col. 31, lines 28-35 and abstract) and are produced in formulations containing extenders and other compounds (col. 33, lines 43-67, and claim 5).

What it lacks is the substitution of chloro in position 5 of the thiophene ring for a hydrogen atom as the preferred form of the invention.

However, US 7,176,228 B2 recites preferred substitutions on the thiophene ring, as discussed above. R<sup>7</sup> in the prior art is position 5 of the thiophene ring. The prior art discloses that R<sup>7</sup> could be hydrogen, thus suggesting the instantly claimed species. The compounds of the prior art are also microbicides like the compounds of the instant invention. Thus, it would have been obvious for a person of ordinary skill in the art, which would be a chemical artisan with a bachelor's degree, at the time of the invention, to make the compounds disclosed in US 7,176,228 B2 with R<sup>7</sup> being a hydrogen atom, as per teachings of US 7,176,228 B2, and use them as microbicides.

One skilled in the art would have also found the claimed compounds prima facie obvious in light of US 7,176,228 B2 because the instantly claimed compounds and the compounds of US 7,176,228 B2 have the same core structure, that of a 2'-phenyl-2-

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chlorothiophene-3-carboxanilide. The motivation to make the claimed compounds derives from the expectation that structurally similar compounds would possess similar activity (i.e. agricultural use). Both, the instantly claimed compounds and the compounds US 7,176,228 B2 are used as microbicides in crop protection (col. 31, lines 33-39). In addition, the prior art teaches many variations of the compounds, and a general synthetic scheme that could be used to make them (columns 20-24). Because they are used for the same use, one skilled in the art would enjoy a reasonable expectation of success.

### ***Double Patenting***

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-2 and 4 are rejected on the ground of nonstatutory double patenting over claims 1-4 and 7-8 of U. S. Patent No. 7,208,169 B2 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: A represents S (Sulfur) or O (oxygen); M represents phenyl and wherein Z is Z1 and Z1 represents optionally substituted phenyl.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

6. Claims 1-2 and 4 are provisionally rejected on the ground of nonstatutory double patenting over claims 15-26 of copending Application No. 10/538242. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows: A represents S (Sulfur) or O (oxygen); M represents phenyl and wherein Z is Z1 and Z1 represents optionally substituted phenyl.

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7. Claims 1-2 and 4 are provisionally rejected on the ground of nonstatutory double patenting over claims 1-4 of copending Application No. 10/579033. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows: A represents S (Sulfur) or O (oxygen); M represents phenyl and wherein Z is Z4 and Z4 represents a silylated C2-C20 alkenyl or alkynyl.

8. Claims 1-2 and 4 are provisionally rejected on the ground of nonstatutory double patenting over claims 1-4 of copending Application No. 10/597723. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows: A represents S (Sulfur) or O (oxygen); M represents phenyl and wherein Z is Z3 and Z3 is as defined.

Claims 1-2 and 4 are provisionally rejected on the ground of nonstatutory double patenting over claims 1-4 of copending Application No. 12/097753. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that

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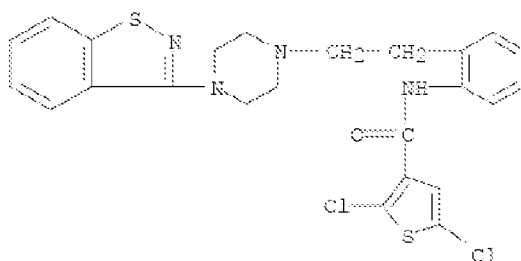
compending application since the referenced compending application and the instant application are claiming common subject matter, as follows: A represents S (Sulfur) or O (oxygen); M represents phenyl and wherein Z is Z1 and Z1 represents optionally substituted phenyl.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other compending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

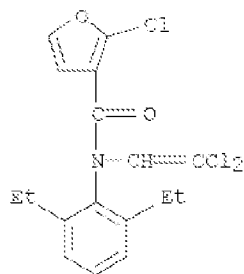
### **Objections**

Claim 1-2 and 4 are objected to for containing non-elected subject matter.

### **Note: References of Interest**



WO 2004041793 discloses



JP 02178259 discloses

### Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VALERIE RODRIGUEZ-GARCIA whose telephone number is (571)270-5865. The examiner can normally be reached on Monday-Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph K. McKane can be reached on 571-272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kamal A Saeed/  
Primary Examiner, Art Unit 1626

/VALERIE RODRIGUEZ-GARCIA/  
Examiner, Art Unit 1626